

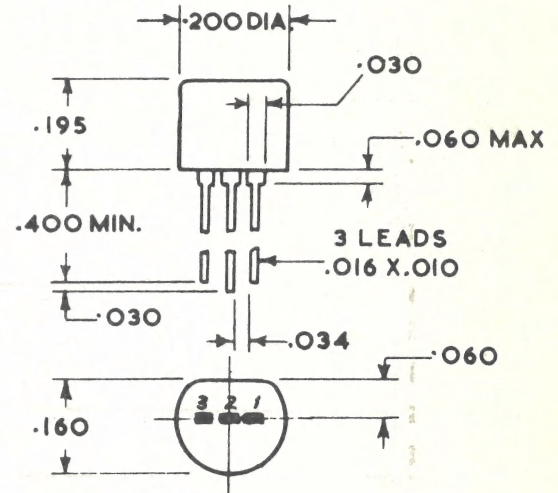


AMALGAMATED WIRELESS VALVE CO. PTY. LTD.

note Equivalent to:  
 AS148 BC108 : BC148  
 AS149 BC109 : BC149

The AS148 and AS149 are n-p-n silicon planar epitaxial transistors for general purpose use in audio and switching circuits. The AS149 is a low-noise high gain unit. These units are in epoxy packages.

#### DIMENSIONAL OUTLINE

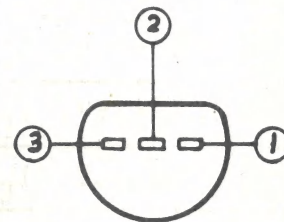


Dimensions in Inches

#### ABSOLUTE MAXIMUM RATINGS

|                           |   |          |
|---------------------------|---|----------|
| Collector-base voltage    | = | 20 volts |
| Collector-emitter voltage | = | 20 volts |
| Emitter-base voltage      | = | 5 volts  |
| Emitter current           | = | 100mA    |

#### TERMINAL DIAGRAM



Lead 1-Emitter  
 Lead 2-Base  
 Lead 3-Collector

#### THERMAL RATINGS

Dissipation in an ambient temperature up to 25°C ----- 300mW max.  
 Derate linearly to zero at 135°C.

During soldering lead temperature must not exceed 255°C for 10 secs. max. within 1/16" of can.

Storage temperature -25°C to 135°C.

31.10.67



CHARACTERISTICS AT 25°C

AS148

AS149

| PARAMETER      | CONDITIONS                                | MIN. | TYP. | MAX. | UNITS   |
|----------------|---|------|------|------|---------|
| $I_{CB0}$      | $V_{CB} = 20V$                            |      |      | 15   | nA      |
| $I_{EB0}$      | $V_{EB} = 5V$                             |      |      | 100  | $\mu A$ |
| $V_{EBF}$      | $V_{CB} = 20V$                            |      |      | 1    | V       |
| $V_{CEO}$      | $I_C = 2mA$                               | 20   |      |      | V       |
| $V_{CE(sat.)}$ | $I_C = 10mA, I_B = 1mA$                   |      |      | .25  | V       |
| $f_T$          | $V_{CE} = 5V, I_C = 0.5mA$                |      | 85   |      | MHz     |
| $f_T$          | $V_{CE} = 5V, I_C = 10mA$                 |      | 300  |      | MHz     |
| $C_{b'c}$      | $V_{CB} = 5V, I_E = 0$                    |      | 2.5  |      | pF      |
|                |   |      |      |      |         |
|                | AS148                                     |      |      |      |         |
| $I_B$          | $V_{CE} = 5V, I_E = 10\mu A$              |      | 85   | 250  | nA      |
| $I_B$          | $V_{CE} = 5V, I_E = 2mA$                  |      | 10   | 18.5 | $\mu A$ |
|                |   |      |      |      |         |
|                | AS149                                     |      |      |      |         |
| $I_B$          | $V_{CE} = 5V, I_E = 10\mu A$              |      |      | 100  | nA      |
| $I_B$          | $V_{CE} = 5V, I_E = 2mA$                  |      |      | 9.6  | $\mu A$ |
| NF             | $V_{CE} = 5V, I_C = 0.2mA$                |      |      |      |         |
|                | $\Delta f = 30Hz - 15kHz, R_s = 2K\Omega$ |      |      | 4    | dB      |
|                |   |      |      |      |         |
|                |   |      |      |      |         |
|                |   |      |      |      |         |
|                |   |      |      |      |         |
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